

A Pilot Intervention Study of Structured Art Therapy to Enhance Psychological Well-Being and Quality of Life in Older Adults

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ABSTRACT

Background: Aging leads to decreases in physical, mental, and social abilities, affecting the well-being of older people. Although art therapy is widely used, there is still little research on its specific methods and benefits for older adults. This study looked at the initial effects of organized art therapy on enhancing the Quality of Life (QoL) and Psychological Well-being (PWB) of older adults. **Methods:** This pilot study used a quasi-experimental design with pre- and post-tests without a control group. Art therapy, including drawing, coloring, making handicrafts, and collage activities, was conducted in one nursing home in Semarang, including 40 residents experiencing loneliness based on the University of California, Los Angeles (UCLA) loneliness scale. The World Health Organization Quality of Life-Bref (WHOQOL-BREF) questionnaire and the Ryff's Psychological Well-Being Scale (RPWBS) were used. Since the data distributed normally, a paired *t*-test was used to examine the effects of art therapy; meanwhile, the QoL domains used the Wilcoxon signed rank test because the data did not distribute normally. **Results:** Post-intervention assessments indicated an improvement in both QoL and PWB scores, with the average QoL score increasing by 5.86 and the average PWB score rising by 4.35. Nevertheless, these results are preliminary and should not be construed as definitive evidence of effectiveness. **Conclusion:** Preliminary findings suggest that the intervention is feasible and may improve QoL and PWB. Nonetheless, the clinical utility of the intervention is not yet established, owing to the pilot study design, small sample size, and non-probability sampling. Consequently, larger controlled studies are necessary.

Keywords: Aged; Art Therapy; Feasible, Lonely, Mental Health

INTRODUCTION

Mental health problems are prevalent in older adults. The global prevalence rates for depression, anxiety, and stress in older people are 19.2%, 16.5%, and 13.9%, respectively. These rates are notably higher in certain regions and among specific groups, such as those in nursing homes (Jalali *et al.*, 2024). Likewise, in Indonesia, depression is a common problem among seniors aged 75 and over, with a prevalence of 14.5% (Ministry of Health Republik Indonesia, 2018; Santoso *et al.*, 2023). Other research indicates that 60.03% of seniors experience depressive symptoms (Susanty *et al.*, 2024).

The major contributor to depressive symptoms in older adults, particularly among nursing home residents is loneliness (Isik *et al.*, 2021; Zhao *et al.*, 2018). It is up to 71% residents who report experiencing loneliness (Molas-Tuneu *et al.*, 2023). Fear of death and comorbid diseases in addition to aging conditions often impact mental health problems that diminish QoL by impairing physical health, social relationships, and PWB (Bharti & Bharti, 2024; Koçak *et al.*, 2025). Likewise, PWB, including personal growth, purpose in life, and emotional stability factors, is closely linked to increased emotional distress that is also associated with lower QoL (Lopez *et al.*, 2024; Sadauskaitė *et al.*, 2025).

The World Health Organization (WHO) states that the number of people aged 60 years or older is expected to exceed 2 billion by 2050, which will likely increase the prevalence of mental health issues in this demographic (Al-Mossawy *et al.*, 2025; Fakhimi, 2025). The low level of QoL and PWB contribute to reduced

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independence and autonomy (de Mendonça Lima *et al.*, 2019; Supasiri *et al.*, 2019). It strains public health and social welfare systems through higher healthcare costs, hospitalizations, and demand for mental health services; therefore, the WHO emphasizes early diagnosis and comprehensive care to prevent poorer outcomes. (Fakhimi, 2025).

Pharmacotherapy is commonly employed to address mental health concerns in older adults. However, it is associated with adverse effects and potential drug interactions (Baron & Uno, 2019). Non-pharmacological interventions, including cognitive behavioral therapy, social engagement, and art therapy, present viable alternatives to enhance PWB and life satisfaction (Gunawan *et al.*, 2025; Liang, 2024). Previous studies reported elderly activities that involve physical, emotional, and social activities showing many positive impacts on QoL and PWB (Lakshmanan *et al.*, 2024; Liu *et al.*, 2025).

Several studies have shown art therapy to address mental health issues in various age groups and conditions. Art therapy contributes to PWB by nurturing artistic identity, developing a sense of purpose, and facilitating social connections (Rossano & Cotter, 2024; Seo *et al.*, 2021). It has been shown to effectively enhance cognitive functioning and provide emotional comfort for older individuals experiencing cognitive decline (Sahai & Tiwari, 2025) and alleviate anxiety and improve PWB and QoL in older adults (Emblad & Mukaetova-Ladinska, 2021; Putri *et al.*, 2025). A study on creative and arts-based interventions such as engaging in poetry sessions has been shown to foster resilience and social connectedness, thereby enhancing PWB (Badawy *et al.*, 2024; Choi, 2025).

Some studies have shown that art therapy can significantly improve QOL in pediatric (Zhou *et al.*, 2025) and adult cancer patients, alleviating emotional symptoms and increasing mental resilience and self-esteem (Bosman *et al.*, 2021; Elimimian *et al.*, 2020). Seeing that art therapy demonstrated potential in enhancing the PWB and QoL of older adults by focusing on essential aspects of well-being such as self-acceptance (Haeyen & Wanten, 2024), life purpose, and positive relationships, the RPWBS Theory offers a comprehensive framework for comprehending and enhancing PWB through this therapeutic method (Laranjeira *et al.*, 2019; Springer *et al.*, 2011). The design and implementation of interventions vary greatly, including differences in duration, delivery format, and specific activities. This variability makes it difficult to compare results across studies and to draw clear conclusions about their effectiveness. Moreover, there is limited evidence of how feasible and acceptable a standardized intervention protocol is for the target population. Therefore, this pilot study was conducted to evaluate the feasibility and initial effects of a standardized intervention protocol.

METHODOLOGY

Study Design and Sample

This was a quantitative pilot study that employed a pre- and post-intervention evaluation without a control group. This study was conducted at a nursing home in Semarang City, Indonesia, with a total of 56 residents, 40 of whom were selected using a purposive sampling technique. Participants were selected based on several inclusion criteria, including functional status (Katz Index B), ability to understand instructions and communicate well, and experiences of loneliness (using the UCLA Loneliness Scale).

Participants unable to complete the full program were excluded. The sample was small because the study targeted lonely older adults in a limited number of nursing homes in Semarang. Nevertheless, as a feasibility study, it provides an important empirical foundation for larger studies by focusing on intervention feasibility and participants' initial responses rather than broad population-level applicability (Li *et al.*, 2021; Sim, 2021).

Research Tools

The UCLA loneliness scale consists of 20 items that have been translated into Indonesian and validated by expert judgment. This scale uses a Likert scale model with 4 alternative answers: Always (S), Often (S), Rarely (J) and Never (TP). There are positive (favorable) question items at numbers 2, 3, 4, 7, 8, 11, 12, 13, 14, and 17 as well as negative (unfavorable) question items at numbers 1, 5, 6, 9, 10, 15, 16, 19, and 20. The total score of the 20 question items will be interpreted into 4 categories, namely not lonely (20-34), mild loneliness (35-49), moderate loneliness (50-64), and severe loneliness (65-80).

This study investigated the feasibility of art therapy as a nursing intervention to enhance the PWB and

QoL among older adults. PWB is a multifaceted construct that encompasses various aspects of mental health and QoL. It includes emotional, cognitive, personality, and social factors, playing a crucial role in overall mental health and life satisfaction (Pelagi *et al.*, 2025). The 18-item RPWBS was used to measure PWB. The Indonesian version has six parts that make up PWB. PWB is determined by the total score obtained from self-assessments described through items in a Likert-style questionnaire. The questionnaire has excellent construct validity and high reliability (Muttaqin, 2022; Springer & Hauser, 2006).

Meanwhile, QoL can be understood as the way individuals view their lives in the context of society, which is influenced by existing culture and value systems (Vila *et al.*, 2024). QoL was assessed using the WHOQOL-BREF, a 26-item questionnaire covering four main domains with high internal consistency, including the Indonesian version. Each domain is the sum of several questions, namely the physical domain (Q3, Q4, Q10, Q15, Q16, Q17), the psychological domain (Q5, Q6, Q7, Q11, Q19, Q26), the social domain (Q20, Q21, Q22), and the environmental domain (Q8, Q9, Q12, Q13, Q14, Q23, Q24, Q25). The scores from each domain (raw scores) will later be transformed into a value of 0-100 using transformed scores. The scores for each domain are accumulated and divided by 4, then categorized as follows: high QoL ≥ 67 , moderate quality of life ≥ 33 and < 67 and low QoL < 33 (Goes *et al.*, 2021; Sofiana *et al.*, 2023). Both instruments are those that have been published openly and widely used in previous research.

Implementation Phase

Respondents completed six one-hour art therapy sessions. At the beginning of the program, social engagement, therapy ethics, and treatment goals were introduced to build trust (King *et al.*, 2021). As outlined in Table 1, the sessions included handicrafts such as headbands, flowers, and key chains (Igreja *et al.*, 2025; Pöllänen & Weissmann-Hanski, 2020), collage-making using old newspapers (Pramudito *et al.*, 2023), and drawing and coloring (Turturro & Drake, 2022), with materials tailored to each activity. Each session comprised orientation, core activities, and reflection facilitated by nursing students and nursing home staff (Forchuk, 2024; Forchuk *et al.*, 2021). Further activity details are presented in Table 1.

Data was analyzed using IBM SPSS statistical software version 2017, Chicago, USA. To assess statistical differences between pre- and post-intervention, a paired sample test was employed, given the normal distribution of the total score data. This analysis aimed to evaluate the significant impact of art therapy on respondents' QoL and PWB. Conversely, as the QoL data per domain did not follow a normal distribution, the Wilcoxon signed rank test was utilized. The significance level was established at $\alpha = 0.05$.

Table 1: Art Therapy Activities

Week	Session	Activities	Instrument	Details of activities
0	1	Loneliness measurement	UCLA <i>Loneliess Scale</i>	Selected participants according to inclusion criteria
	2	QoL and PWB measurement	WHOQOL-BREF RPWBS	interviewed and filled out questionnaires with older people who have met the inclusion criteria
Art Therapy Program				
1	1	Handicrafts (headbands and flowers)	1. Wire feathers 2. Satay skewers 3. Leaf tape 4. Clear tape 5. Glue gun 6. Plastic bucket 7. Ribbon 8. Headband 9. Scissors	Stage I: Introduction and Explanation Stage II: <i>Making flowers and headbands from wire feathers.</i> Respondents received a pre-prepared package of wire feathers. They then practiced making flowers and headbands using wire feathers, following the demonstrations of the accompanying student. Respondents were also allowed to be creative and add other elements according to their imagination.
	2	Collage-making	1. Table 2. Chair 3. Patterned paper 4. Old newspaper 5. Storage container 6. Glue 7. Scissors 8. Skewers 9. Colored pencils 10. Markers	<i>Making a collage from old newspapers</i> Respondents received a pre-prepared collage kit. They will then be asked to arrange the newspaper pieces and glue them onto patterned paper. Respondents were also free to add images or colors to the patterned paper according to their imagination. <i>Drawing and Coloring</i> Respondents received a pre-prepared sheet of patterned paper. They were asked to color the image using colored pencils. Respondents were also free to add images to the patterned paper according to their imagination.

2	3	Drawing and Coloring	1. Table 2. Chair 3. Paper with pictures or patterns 4. Colored pencils 5. Pencil 6. Eraser	<i>Making key chains from wire fur</i> Respondents received a pre-prepared package of wire feathers. Then they practiced making key chains using wire feathers, following the demonstrations of their student mentors. Respondents will also be allowed to be creative and add other elements according to their imagination. Stage III: Discussion The facilitator led the discussion by asking respondents to share their experiences and work with the other respondents.
	4	Handicrafts (key chains)	1. Pipe cleaner 2. Key chain 3. Googly eyes 4. Scissors 5. Glue gun	
3	5	Collage-making	1. Table 2. Chair 3. Patterned paper 4. Old newspaper 5. Storage container 6. Glue 7. Scissors 8. Skewers 9. Colored pencils 10. Markers	
	6	Drawing and Coloring	1. Table 2. Chair 3. Paper with pictures or patterns 4. Colored pencils 5. Pencil 6. Eraser	
Evaluation				
3	6	Post-Program Assessment	WHOQOL-BREF RPWB	Completing questionnaires using predetermined instruments to compare the results before and after the art therapy program is provided.

Ethical Considerations

The researchers obtained ethical approved from the Ethical Committee of the Faculty of Medicine, Universitas Diponegoro, Indonesia, with reference number 097/EC/KEPK/FK-UNDIP/IV/2025 on 24th April 2025.

RESULTS

Respondents Characteristic

Forty residents, aged 51–90, who experienced loneliness participated in the screening process. Most were female, aged 61–70, and had graduated from elementary school. All respondents experienced loneliness (Table 2).

Table 2: Characteristics of Older Adults (n=40)

Characteristic	N	Percentage (%)
Age		
51-60	7	17.5
61-70	18	45
71-80	11	27.5
81-90	4	10
Gender		
Male	16	40
Female	24	60
Education		
No Formal Education	8	20
Elementary School	15	37.5
High School	14	35
University	3	7.5
Loneliness		
Low	24	43
Moderate	16	29
Severe	0	0
Quality of Life (QoL)		
High	6	15%
Moderate	23	57.5%
Low	11	27.5%

Effect of the Structured Art Therapy

Respondents showed differences in QoL before and after art therapy intervention, as shown in Figure 1 and Table 3.

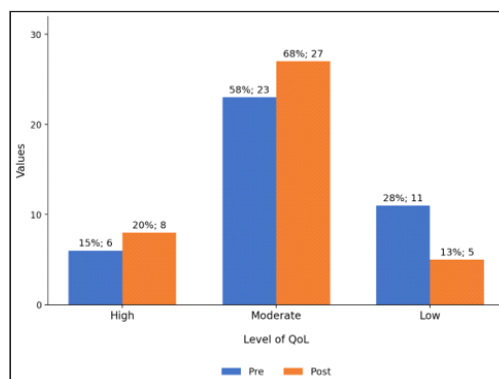


Figure 1: Changes in Quality of Life (N=40)

Figure 1 shows that the number of respondents with high and moderate QoL increased from 15% to 20% and from 58% to 68%, respectively, while low QoL decreased by 5% after the art therapy intervention was given. Respondents with moderate QoL still constitute the largest number. Meanwhile, this study evaluated the domains of QoL. The most significant improvement in average QoL was seen in the psychological domain, followed by the social, physical, and environmental domains (Table 2).

Table 3: Improvement Score of the Quality of Life in Every Domain

Domain	Mean		SD ^a		Statistical Test
	Pre	Post	Pre	Post	
Physical	57.42	61.60	5.987	4.678	$p = 0.000$ Wilcoxon Signed Rank Test $\alpha < 0.05$
Psychological	52.67	60.90	9.379	6.652	
Social	49.70	57.80	12.466	9.202	
Environment	51.25	54.18	6.180	5.002	

a: standard deviation

Table 3 presents the minimum, maximum, mean, and standard deviation values of QoL and PWB, showing that structured art therapy significantly affected and was associated with changes in both outcomes.

Table 4: Comparison of Difference of Quality of Life and Psychological Well-being before and after Structured Art Therapy

Variables		N	Minimum	Maximum	Mean	SD ^a			
Quality of Life (QoL)	Pre-	40	40.50	64.25	52.7625	5.81387			
	Post-	40	47.00	70.50	58.6187	4.30935			
Psychological Well - being	Pre-	40	27	61	44.03	9.267			
	Post-	40	32	64	48.37	8.161			
Valid N (listwise)		40							
Variables	Paired Differences					t	df	Sig.	d
	Mean	SD ^a	Std. Error Mean	95% Confidence Interval of the Difference					
				Lower	Upper				
Pre – Post Quality of Life	-5.85625	2.91431	0.46079	-6.78829	-4.92421	-12.709	39	0.000	2.01
Pre – Post Psychological Well-being	-4.350	1.748	0.276	-4.909	-3.117	-15.743	39	0.000	2.49

Table 4 results showed that a paired-samples *t*-test on QoL and a significant difference between pre- and post-treatment scores, $t(39) = -12.71, p < 0.001$, with a very large effect size (Cohen's $d_z = 2.01$). For PWB, $t(39) = -15.74, p < 0.001$, with a very large effect size (Cohen's $d_z = 2.49$), indicating the treatment had a very strong impact on changes in respondents' scores.

DISCUSSION

The results of the study showed the shift in QoL and PWB levels after structured-art therapy (QoL 52.76 to 58.62 and PWB 44.03 to 48.37). Most participants showed consistent score improvements, with confidence intervals favoring improvement and suggesting intervention-related rather than coincidental changes. This is consistent with a previous systematic review reporting significant benefits of art therapy for QoL and cognitive and emotional functioning (de Souza *et al.*, 2022). Another study by Shoesmith *et al.* (2021) found that a six-week, person-centred art intervention may improve QoL and social functioning in people with dementia, choice and socialization supporting its acceptability.

Art therapy activities are related to the opportunity for the elderly to express their emotions and thoughts in each art therapy session (Lachnit & Rastogi, 2023; Putri *et al.*, 2025), which can help stabilize the emotions of older adults and create a comfortable environment (Albañil-Delgado *et al.*, 2020; Putri *et al.*, 2025). During reflection sessions, participants reported comfort, peace, and enjoyment, suggesting that art activities provided relaxing sensory stimulation during leisure time. From a biopsychosocial perspective, improvements across all QoL domains, particularly social and psychological well-being, may reflect the benefits of psychosocial stimulation, social engagement, and participant choice rather than biomedical changes alone (Bolton, 2023; Ngamwongwiwat *et al.*, 2023).

Peplau's Interpersonal Relations Theory assumes that structured art therapy leverages preserved capacities and facilitates therapeutic communication through nonverbal expression (Culligan *et al.*, 2025; Durocher *et al.*, 2022). Therefore, activities like drawing, painting, and other forms of creative expression can be soothing and help manage and alleviate anxiety symptoms and depression (Abbing *et al.*, 2019; Koltz & Koltz, 2022) and improve cognitive functions from painting activities, which are particularly effective in impacting QoL among older adults (Masika *et al.*, 2020; Putri *et al.*, 2025).

Crafting in art therapy provides calming tactile stimulation, maintains sensory engagement, and helps mental health by reducing stress and anxiety (Koltz & Koltz, 2022; Vasudevan *et al.*, 2025). Art activities allow older adults to express their creativity, cultural values, and personal interests, thereby enhancing life satisfaction and a sense of purpose. Furthermore, the use of fine motor skills and hand-eye coordination can maintain physical mobility and QoL (Albañil-Delgado *et al.*, 2020; Kalma *et al.*, 2019). Improvements in the physical and environmental domains showed indirect positive effects, such as increased self-efficacy, sense of meaning, and comfort in social settings during sessions. Another study testing art therapy in the form of the Art, Colors, and Emotional Treatment (ACE-t) showed significant improvements in general cognition, language, and executive functions among participants (Savazzi *et al.*, 2020).

Older adults who experience psychological and mental disorders need to receive the right intervention (Kertapati *et al.*, 2022). Clinically, structured art activities may enhance social interaction, emotional expression, meaning in life and reduce psychological distress, supporting their use as a psychosocial nursing intervention for older adults. Art therapy may also improve cognitive well-being through greater neural plasticity and emotional engagement (Sahai & Tiwari, 2025). Another study highlighted the effectiveness of art therapy in reducing depressive symptoms and increasing self-esteem in elderly people in nursing homes, thus having a positive impact on PWB (Ching-Teng *et al.*, 2019).

From a gerontological perspective, structured art therapy aligns with the concept of successful aging and the theory of selective optimization with compensation, where the elderly are encouraged to use the capacities they still have while also finding new ways to maintain psychological function (Moeller & O'Brien, 2024). Psychologically, the increase in PWB suggests that art can be a medium for self-reflection and meaning construction, which is particularly important in the final stages of life for older adults (Koltz & Koltz, 2022; Stephenson, 2021). This relationship is theoretically grounded in the RPWBS model, which assumes that opportunities for emotional expression, reflection, and meaning-making facilitated through art activities support self-acceptance and purpose in later life (Darewych, 2022).

The variety of forms of arts interventions and the lack of standards make research findings diverse (Lee *et al.*, 2019). One study explained that the activities, which are readily accessible, have demonstrated improvements in mood and self-esteem among older adults (Fraser & Ostby, 2022). Art therapy like Arts on Prescription has shown positive impacts on mental well-being, creativity, and social relationships among older adults because it

serves as a means of self-reflection and meaning-making, which are important in the aging process (Malhotra *et al.*, 2024; Poulos *et al.*, 2019).

The adherence and acceptability of art therapy among elderly participants suggest that these individuals are willing to engage in such interventions (Savazzi *et al.*, 2020). Therefore, group-based community activities offer holistic support for cognitive, emotional, and social well-being. Craft groups strengthen social connections, reduce isolation, foster belonging and mutual support, affirm individual and collective strengths, and promote continued learning and development (Schnittka, 2021). Also, Keisari *et al.* (2024), supports these findings, noting consistent modest gains in well-being indicators across various art therapy interventions, which prioritize participant engagement and implementation fidelity over causal inference.

This study evaluated the initial findings of an art therapy model that integrates drawing, coloring, crafting, and collage. The primary aim of a pilot study is often to identify potential challenges, refine methodologies, and assess the practicality of the intervention protocol. This preliminary phase helps ensure that subsequent research is well-designed and adequately powered to test hypotheses rigorously. Consequently, any observed effects or trends in the pilot study should be interpreted with caution and validated through more comprehensive trials before informing clinical practice or policy decisions (Adams-Price & Morse, 2018; Beets *et al.*, 2020). Collectively, these studies support art therapy's feasibility and acceptability across diverse cultural and clinical settings, but further research is needed to confirm its efficacy as a psychosocial intervention for older adults.

Art therapy has important implications for gerontological nursing and can be integrated into assessment, diagnosis, planning, implementation, and evaluation across healthcare settings (Ho *et al.*, 2019). Nurses also serve as educators and facilitators, enabling caregivers and social institutions to sustain interventions (Srolovitz *et al.*, 2022). Through therapeutic communication, consistent with Peplau's phases of orientation, identification, exploitation, and resolution, nurses can create a supportive environment in which older adults feel valued and confident expressing themselves. Using art as a communication medium may enhance openness and strengthen the nurse–patient relationship (Hall & Shearer, 2025).

As a pilot study, this research primarily serves to explore the feasibility, design, and initial outcomes of the intervention rather than to provide definitive evidence of its effectiveness (Beets *et al.*, 2020). Pilot studies are typically conducted on a smaller scale with limited sample sizes and shorter durations, which restricts the generalizability and statistical power needed to draw firm conclusions about the intervention's impact. Therefore, while the findings may offer valuable insights and guide the development of future, larger-scale studies, they should not be used as a conclusive reference for the intervention's efficacy (Teresi *et al.*, 2022).

Limitations

This feasibility study is limited by its small sample, lack of a control group, limited applicability to broader populations, and potential self-report bias; therefore, findings on feasibility, acceptability, and possible benefits should be interpreted cautiously. Future research should use adequately powered randomized controlled trials and longitudinal designs to establish causal effectiveness, assess long-term sustainability, examine moderator and mediator variables, and develop a standardized art therapy protocol for older adults.

Future Scope

Future research should further validate art therapy as a structured component of gerontological nursing care for older adults experiencing loneliness. Larger, fully powered randomized controlled trials and longitudinal studies are needed to assess its sustained effects on PWB and QoL, identify potential side effects, and develop appropriate management strategies. Further investigation should also clarify the most effective forms and structures of art therapy to support standardized, holistic nursing practice for aging populations.

CONCLUSION

Structured art therapy positively influences the QoL and PWB of isolated older adults. Enhancements in QoL across all four domains suggest that activities prompting seniors to their emotions and thoughts can stabilize emotions and foster a comfortable environment. Structured art therapy contributes to successful aging by encouraging older individuals to employ their existing skills and explore new methods to maintain cognitive

function. Psychologically, the increase in PWB indicates that art engagement facilitates self-reflection and the search for meaning, which is crucial in later life stages. Participation in art activities provides opportunities for emotional expression, introspection, and meaning-making, promoting self-acceptance and a sense of purpose in later years.

Integrating artistic activities into social work care may guide long-term care towards a more diverse, unique, and innovative approach. Despite the evident benefits of art therapy, challenges exist in its implementation, including the necessity for more rigorous scientific studies to thoroughly evaluate its efficacy and effectiveness. Additionally, research on art therapy with older adults often encounters challenges related to the specific needs and conditions of this demographic.

CRedit Authorship Contribution Statement

U.H.: Conceiving and designing the study, supervising the research process, collecting and interpreting data, drafting and revising the manuscript, and serving as the corresponding author. M.M.S.: Interpreted the research findings and enhanced the discussion to provide a more comprehensive interpretation of the results. F.M. and L.N.F.: Data analysis and interpretation under the supervision of U.H. and M.M.S. All four authors significantly contributed to the manuscript's development, engaging collaboratively in essential tasks such as conceptualization, data analysis, drafting, and critical revision.

AI Assistance Declaration

Generative AI supported language editing, grammar improvement, idea generation, and discussion framing. All authors reviewed, revised, and approved the final manuscript and take full responsibility for its content.

Conflict of Interest

The authors declare that they have no competing interests.

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